



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,702	03/04/2004	Simon B. L. Watterton	WATTERTON1	5121

1444 7590 01/27/2006

BROWDY AND NEIMARK, P.L.L.C.  
624 NINTH STREET, NW  
SUITE 300  
WASHINGTON, DC 20001-5303

EXAMINER

MILLS, DANIEL J

ART UNIT PAPER NUMBER

3679

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,702	<b>Applicant(s)</b> WATTERTON	
	<b>Examiner</b> Daniel J. Mills	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

The objection to the abstract of the disclosure is withdrawn in view of the amendment dated 10/28/2005.

The disclosure is objected to because of the following informalities: "polyurethan" should be changed to –polyurethane— page 8 line 17.

Appropriate correction is required.

Amendments must show and mark all material deleted and added, see page 3 line 1 of amendment to specification.

### ***Drawings***

The drawings are objected to because improper crosshatching is used in Figure 1 (13 should indicate the correct material); Cross sectional cut of 11 (cut 2C) is indicated in the wrong place; the circles indicated on Figure 2A (just below cut 2B and above 11) must be deleted as they are lead lines and not part of the invention. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes

Art Unit: 3679

made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 12 recites "essentially" (line 4) which should be changed to be – substantially--. Correction is required.

### ***Claim Rejections - 35 USC § 112***

Section 112 rejections are withdrawn in view of amendment dated 10/28/2005

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3679

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 5,516,226) in view of Robertson et al (Robertson – US 5,361,494) and Isaac et al. (Isaac – US 5,613,794).

As to claim 1, Wu discloses a wheelchair frame member comprising a first arm (12) formed as a single unit with a first cross section, a second arm (11) formed as a single unit with a second cross section, and a knee-shaped element (140), which is solid therethrough and formed as a single unit made from plastic, wherein said first arm is connected to said second arm via the knee-shaped element, a solid connection between the first arm and the knee-shaped element and a solid connection between the second arm and the knee-shaped element being formed and wherein the knee-shaped element provides at each end thereof a cross section corresponding in shape to that of the first cross section and the second cross section.

Wu fails to disclose that the first and second cross sections are different, that the knee-shaped element is composite, and that the arms are connected to the knee-shaped element by mounting glue.

Robertson teaches the use of a joint in which first (104) and non-circular second (108) arms are aluminum, hollow, thin-walled tubes that have differently shaped cross sections and are joined by a knee shaped element, and in which the knee-shaped element provides at each end thereof a cross section corresponding in shape to that of the first cross section and the second cross section for the purpose of allowing the mounting of clamps to member (108) in such a way that the clamps are located regardless of any torque on them. Accordingly, it would have been obvious to one of

Art Unit: 3679

ordinary skill in the art at the time of applicant's invention, to modify the arrangement of Wu to include a joint in which first (104) and non-circular second (108) arms are aluminum, hollow, thin-walled tubes that have differently shaped cross sections and are joined by a knee shaped element, which the knee-shaped element provides at each end thereof a cross section corresponding in shape to that of the first cross section and the second cross section as taught by Robertson, for the purpose of allowing the mounting of clamps to member (108) in such a way that the clamps are located regardless of any torque on them

Isaac teaches the use of composite material wherein high-strength fiber reinforcement is added to a plastic for the purpose of increasing the specific strength of the plastic. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention, to modify the arrangement of Wu to include high strength fiber reinforced plastic as taught by Isaac for the purpose of increasing the specific strength of the plastic.

Isaac teaches the use of an adhesive joint between a composite tube (figure 7 223) and a metal tube (224) wherein the tubes are joined in such a way that the composite tube is partially situated inside (228) the metal tube and there is a recess or a cavity (231) for the purpose of insuring a strong joint. Accordingly, it would have been obvious to one of ordinary skill in the tube joining art at the time of applicant's invention to modify the knee-shaped element of Wu to include composite to metal tube joints as taught by Isaac for the purpose of insuring strong joints.

As to claim 2, Wu in view of Robertson and Isaac and results in a wheelchair frame member wherein the first arm and the second arm are tubes or have hollow end areas, wherein said tubes are thin-walled tubes.

As to claim 3, Wu in view of Robertson and Isaac and results in discloses a wheelchair frame member wherein the first cross section is chosen to allow at least one of the following units to be attached to or to be connected with the first tube, a wheelchair seat element (seat element comprising 143, 13, and 15 is connected to 12), a wheelchair backrest.

As to claim 4, Wu in view of Robertson and Isaac and results in a wheelchair frame member wherein the second cross section is chosen to allow at least one of the following units to be attached to or to be connected with the second tube, a foot rest, lever, or bar (Robertson shows the triangular tube shape is to allow secure attachment of a bar – 204) .

As to claim 5, Wu in view of Robertson and Isaac and results in a wheelchair frame member wherein the first arm and the second arm comprise aluminum, titanium, or magnesium (Robertson column 7 lines 39-41).

As to claim 6, Wu in view of Robertson and Isaac and results in a wheelchair frame member wherein the first arm and second arm are metal tubes. Robertson fails to disclose the method by which the metal tubes are formed. However, it is well-settled by case law that patentability of a product-by-process claim is based on the product and not the recited process steps, irrespective of only process steps being recited.

As to claim 7, Wu in view of Robertson and Isaac and results in a wheelchair frame member wherein the first arm are joined to the knee-shaped composite element in a way that provides an overlap between the respective arm and end areas of the knee-shaped composite element.

As to claim 8, Wu in view of Robertson and Isaac and results in discloses a wheelchair frame member wherein the mounting glue is situated in an area between the end portions of the knee-shaped element and of the first and second arm, respectively.

As to claim 9, Wu in view of Robertson and Isaac results in a wheelchair frame member wherein the end portions of the knee-shaped element comprise a recess or a cavity in which the mounting glue is mainly situated.

As to claim 10, Wu in view of Robertson and Isaac results in a wheelchair frame member wherein the knee-shaped element comprises a recess or a cavity spaced apart from each of the ends of the knee-shaped composite element in which the mounting glue is mainly situated.

As to claim 11, Wu in view of Robertson and Isaac results in a wheelchair frame member wherein the knee-shaped element comprises reinforcing carbon fibers or aramid fibers.

As to claim 12, Wu in view of Robertson and Isaac results in a wheelchair frame member wherein one of the arms is substantially upright and the other of the arms is substantially horizontal.



As to claim 13, Wu in view of Robertson and Isaac results in a wheelchair frame wherein the cross-section of either the first arm or the second arm is non-circular, or wherein the cross-section of both the first arm and the second arm are non-circular.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment to at least claim 1 (lines 1-10, 12-14, and 16-19) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3679

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Mills whose telephone number is 571-272-8115. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DJM  
1/20/2006



DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600